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What is claimed is:

1. An ophthalmologic apparatus comprising:
  - a first illuminating optical system for causing a measurement light flux with a specified shape to be incident on a cornea of a subject eye;
  - a first light receiving optical system for receiving a reflected light from the cornea of the subject eye;
  - a first light receiving part for changing a received reflected light from the first light receiving optical system into an electrical signal;
  - a measurement part for obtaining a corneal shape of the subject eye from a received light signal of the first light receiving part plural times at a measurement start point of time and during a subsequent specified period; and
  - a judgment part for judging a state of a dry eye by comparing temporal changes of the corneal shape from measurement results of the measurement part.
- 20 2. An ophthalmologic apparatus according to claim 1, further comprising:
  - a second illuminating optical system for causing a measurement light flux to be incident on a retina of the subject eye;
  - 25 a second light receiving optical system for receiving a light through a conversion member for dividing a reflected light from the retina of the subject eye on which the measurement light flux is incident into many light fluxes; and
  - 30 a second light receiving part for converting a received

reflected light received by the second light receiving optical system into an electrical signal,

wherein

the measurement part measures wavefront aberrations of

5 the subject eye on the basis of divided light fluxes by the conversion member from a received light signal of the light receiving part during a specified period from a start point of time after the subject eye blinks, and

10 the judgment part judges the state of the dry eye by comparing temporal changes of the measurement results on the basis of the corneal shape obtained by the measurement part and measurement results on the basis of the wavefront aberrations.

15 3. An ophthalmologic apparatus according to claim 1, wherein the measurement part determines a measurement period in accordance with the plural measurement results of the corneal shape.

20 4. An ophthalmologic apparatus according to claim 1, wherein in a case where a measurement period longer than the specified period is determined, the measurement part discontinues measurement within the specified period.

25 5. An ophthalmologic apparatus according to claim 1, wherein the state of the dry eye to be judged by the judgment part includes a breakup state.

30 6. An ophthalmologic apparatus according to claim 1, wherein the judgment part determines a function fitting to

the measurement results, and obtains a value relating to a breakup for judgment of the state of the dry eye.

7. An ophthalmologic apparatus according to claim 6,  
5 wherein the value relating to the breakup includes one or plural of a breakup start time, a breakup speed, a breakup amount and a breakup rate.

8. An ophthalmologic apparatus according to claim 1,  
10 wherein

the judgment part further detects a blink, and  
the measurement part performs a measurement of waveform aberrations after a specified time has passed from the blink detected by the judgment part.

15 9. An ophthalmologic apparatus according to claim 8,  
wherein the judgment part detects the blink on the basis of an anterior eye part image.

20 10. An ophthalmologic apparatus according to claim 1,  
wherein a measurement is performed simultaneously for both eyes.

11. An ophthalmologic apparatus according to claim 1,  
25 wherein

the measurement part obtains aberration components of the subject eye including higher order aberrations of at least fifth order from the received light signal of the first light receiving part plural times at a start point of time after  
30 the subject eye blinks and during a subsequent specified

period,

the judgment part judges a state of a dry eye by comparing temporal changes of the higher order aberrations of fifth order or higher from measurement results of the  
5 measurement part.

12. An ophthalmologic apparatus according to claim 2, wherein the conversion member converts the reflected light into at least substantially 21 beams.

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13. An ophthalmologic apparatus comprising:

an illuminating optical system for causing a measurement light flux to be incident on a retina of a subject eye;

15 a light receiving optical system for receiving light through a conversion member for dividing a reflected light from the retina of the subject eye into many light fluxes;

a light receiving part for converting a received reflected light received by the light receiving optical  
20 system into an electrical signal;

a wavefront measurement part for obtaining aberration components of the subject eye including at least higher order aberrations from a received light signal of the light receiving part obtained plural times at a start point of time  
25 after a blink of the subject eye and during a subsequent specified period; and

a judgment part for judging a state of a dry eye by comparing temporal changes of at least the higher order aberrations of measurement results of the wavefront  
30 measurement part.

14. An ophthalmologic apparatus according to claim 13,  
wherein

5       the illuminating optical system illuminates a minute  
area on the retina of the subject eye with a light flux from  
a light source part for emitting a light flux with a first  
wavelength, and

10      the light receiving optical system receives light by the  
light receiving part through a first conversion member  
including a lens part having a high spatial resolution on a  
pupil and for converting part of a reflected light flux  
reflected and returned from the retina of the subject eye into  
at least substantially 17 beams.

15      15. An ophthalmologic apparatus according to claim 13,  
wherein

the light receiving optical system receives light  
through a conversion member for dividing the reflected light  
from the retina of the subject eye into many light fluxes,

20      the wavefront measurement part obtains aberration  
components of the subject eye including higher order  
aberrations of at least fifth order from a received light  
signal of the light receiving part plural times at a start  
point of time after a blink of the subject eye and during a  
25      subsequent specified period, and

the judgment part judges the state of the dry eye by  
comparing the temporal changes of the higher order  
aberrations of fifth order or higher from the measurement  
results of the wavefront aberration measurement part.

16. An ophthalmologic apparatus according to claim 15, wherein the first conversion member converts the reflected light into at least substantially 21 beams.

5 17. An ophthalmologic apparatus according to claim 15, wherein the wavefront measurement part determines a measurement period in accordance with the plural measurement results of wavefront aberrations.

10 18. An ophthalmologic apparatus according to claim 15, wherein in a case where the measurement period longer than the specified period is determined, the wavefront measurement part discontinues measurement within the specified period.

15 19. An ophthalmologic apparatus according to claim 15, wherein the state of the dry eye to be judged by the judgment part includes a breakup state.

20 20. An ophthalmologic apparatus according to claim 15, wherein the judgment part determines a function fitting to the measurement result, and obtains a value relating to a breakup for judgment of the state of the dry eye.

25 21. An ophthalmologic apparatus according to claim 20, wherein the value relating to the breakup includes one or plural of a breakup start time, a breakup speed, a breakup amount, and a breakup rate.

30 22. An ophthalmologic apparatus according to claim 15, wherein

the judgment part further detects a blink, and  
the wavefront measurement part measures wavefront  
aberrations after a specified time has passed from the blink  
detected by the judgment part.

5

23. An ophthalmologic apparatus according to claim 22,  
wherein the judgment part detects the blink on the basis of  
an anterior eye part image.

10 24. An ophthalmologic apparatus according to claim 15,  
wherein wavefront aberrations measurement is simultaneously  
performed for both eyes.